

APPENDIX E

PROCEDURE FOR ANALYSIS OF WAVE DATA FROM 7-MINUTE PEN-AND-INK RECORDS (BASED ON A RAYLEIGH DISTRIBUTION FOR WAVE HEIGHT)

E-1. Run the period template (Figure E-1) along the 7-minute record until a group of fairly uniform waves is found which should contain some of the highest waves. A template can be fabricated on a clear overlay such as acetate.

E-2. Determine the appropriate period of the waves selected in step 1 by using the template according to instructions. When the wave period on the chart falls between two of the periods shown on the template, the analyzer may approximate what is considered to be nearest to the exact period; e.g., if the period is midway between the 5- and 6-second periods, it must be about 5.5 seconds.

E-3. Use Table E-1 to determine which wave should be measured in the full 7-minute record to get the approximate significant height for the waves. The wave number is determined by calling the highest wave in the full 7-minute record as wave number 1; the second highest wave is number 2, etc. Wave

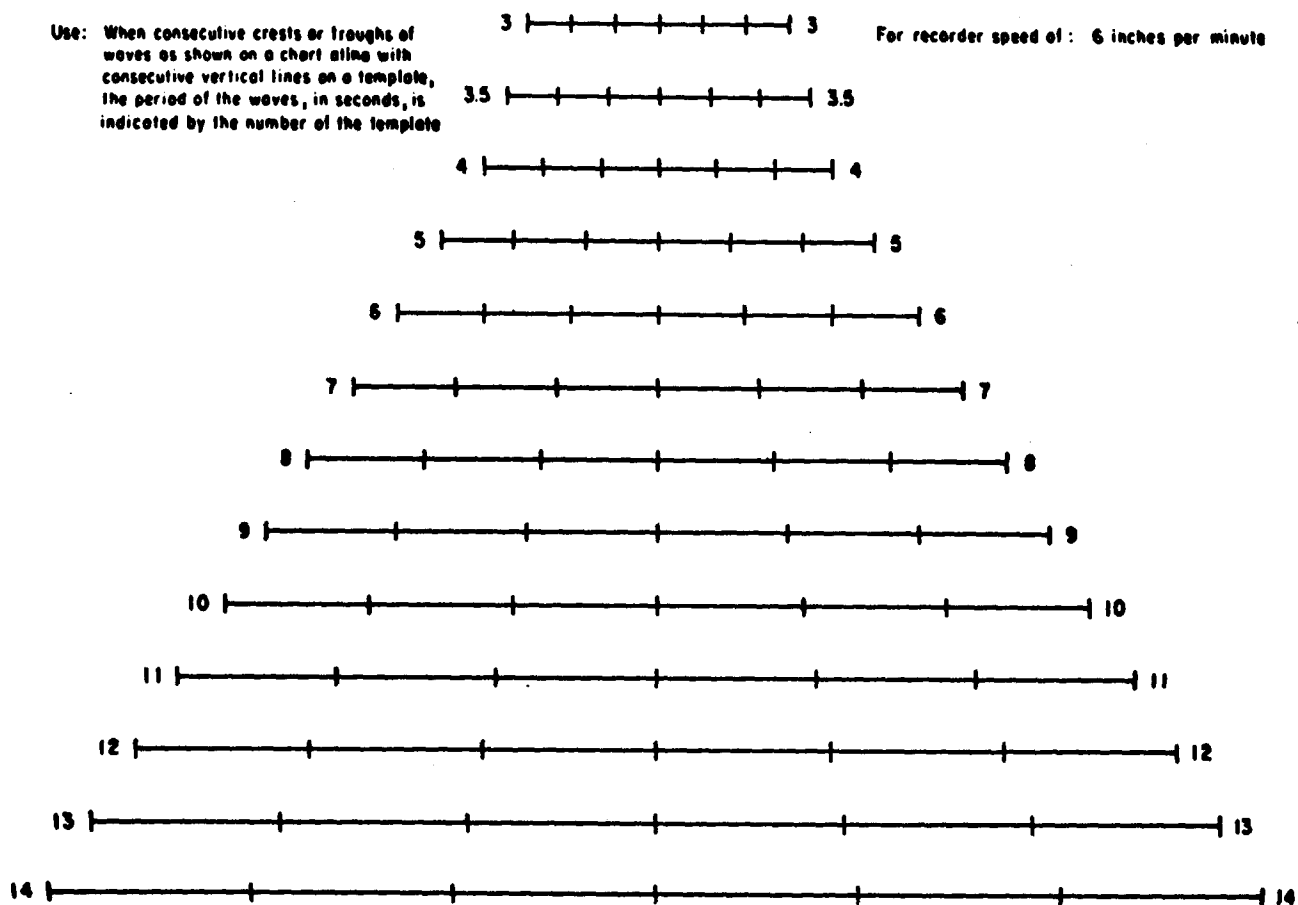


Figure E-1. Sample wave period template

Table E-1

Number of Waves to Measure for Manual Analysis
of 7-Minute Pen-and-Ink Records

Wave period, s	Number of waves to measure
3.0	19
3.5	16
4.0	14
4.5	13
5.0	11
5.5	10
6.0	9
7.0	8
8.0	7
9.0	6
10.0	6
11.0	5
12.0	5
13.0	4
14.0	4
15.0	4
16.0	4

height is defined as the difference in elevation between a wave crest and the preceding trough.

E-4. Determine the height of the wave given by step 3 in terms of small divisions on the chart paper.

E-5. Using the appropriate relationship between chart paper divisions and actual elevations in feet or centimeters, convert the wave height determined in step 4 from chart divisions to feet or centimeters. Estimate to the nearest tenth of a foot or nearest centimeter.